CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2010-XXXX

AMENDING WASTE DISCHARGE REQUIREMENTS
ORDER NO. R5-2007-0134 (NPDES PERMIT NO. CA0079260)

CITY OF YUBA CITY
CITY OF YUBA CITY WASTEWATER TREATMENT FACILITY
SUTTER COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Central Valley Water Board) finds that:

1. On 25 October 2007, the Central Valley Water Board adopted Waste Discharge Requirements Order No. R5-2007-0134, prescribing waste discharge requirements for the City of Yuba City Wastewater Treatment Facility, Sutter County. For the purposes of this Order, the City of Yuba City is hereafter referred to as "Discharger" and the City of Yuba City Wastewater Treatment Facility is hereafter referred to as "Facility."

2. The Facility consists of bar screens, aerated grit removal, primary sedimentation, pure oxygen aeration, secondary sedimentation, chlorine disinfection, dechlorination, and pH adjustment. Wastewater from the Facility is then directed to one of two discharge points. Normally treated wastewater from the Facility is discharged from Discharge Point No. 001 through a multi-port diffuser to the Feather River, a water of the United States, within the Sacramento River Watershed. Alternatively, effluent from the Facility can be directed to one or more of six disposal (percolation) ponds located between the two main east and west levee banks within the Feather River flood plain (above the physical ordinary high water elevation).

3. The California Sportfishing Protection Alliance filed a petition requesting the State Water Resources Control Board (State Water Board) review and vacate Order No. R5-2007-0134. The State Water Board accepted the petition and subsequently adopted Water Quality Order WQ 2008-0010 that remands Order No. R5-2007-0134 to the Central Valley Water Board for several permit revisions, as discussed in findings four through seven, below. This Order reopens and amends Order No. R5-2007-0134 to address the permit revisions required in WQ 2008-0010. Additionally, this Order reopens and amends Order No. R5-2007-0134 based on new information provided by the Discharger. These revisions are discussed in findings eight through ten, below.

Permit Revisions Based on WQ 2008-0010

4. The State Water Board concluded in WQ 2008-0010 that the permit properly allows mixing zones, but fails to identify the points in the receiving water where applicable criteria or objectives must be met (the mixing zone boundary) for acute aquatic life criteria, chronic aquatic life criteria, and human health criteria. The remand specifies that the permit be amended to identify the points in the receiving water where applicable criteria or objectives must be met (identify the mixing zone boundaries for dilution credits) and clarify the dilution credit applicable to human health criteria, as appropriate. In accordance with WQO No. 2008-0010, this Order amends Order No.

R5-2007-0134 by including a description of the mixing zone, including the length of the acute, chronic and human health mixing zone distances. Both a table and a figure were added in addition to the mixing zone description to help in defining mixing zone lengths.

5. The State Water Board found in WQ 2008-0010 that the final report providing dilution values, used to calculate the effluent limitations, does not state whether the dilution model results are based on 25 or 40 open diffuser ports. The State Water Board has directed the Central Valley Water Board to confirm whether the dilution model results are based on 25 or 40 open diffuser ports and modify the effluent limits if necessary. In accordance with WQ 2008-0010, this Order amends Order No. R5-2007-0134 by clarifying the dilution discussion in the Fact Sheet to explain that modeling was performed using 40 open diffuser ports for critical low flow conditions of 1,000 cfs.

6. The State Water Board Order requires monitoring of the ponds at Discharge Point 002 at any time the wastewater is discharged to any of the six disposal ponds that may result in a threat to water quality if the effluent were otherwise discharged to the river at Discharge Point 001. In accordance with WQ 2008-0010, this Order amends Order No. R5-2007-0134 by revising the existing site map of the Facility to show plumbing and clarification of monitoring locations. Effluent monitoring location EFF-001 is located after all treatment process but prior to the valves directing effluent to Discharge Point 001 or 002; therefore, EFF-001 is the monitoring location for both Discharge Point 001 and 002 and no bypass exists between Discharge Point 001 and 002.

7. Order R5-2007-0134 specifies final effluent limitation that will be in effect before (Sections IV.A.1 and IV.B.1) and after (Sections IV.A.2 and IV.B.2) State Water Board adoption of the Lower Yuba River Accord. It asserts that following the implementation of the Accord, additional minimum dilution flows from the Lower Yuba River of 500 cubic feet per second (cfs) will join with minimum dilution flows from the Feather River to provide a minimum flow of 1,500 cfs for dilution of the discharge at critical conditions.

   The Lower Yuba River Accord is designed to implement a complex series of minimum flows for the Lower Yuba River which are dependent on a “schedule” that characterizes water year conditions. For some of the scheduled water years, the minimum in stream flow requirement for the Yuba River may only be 150 cfs in some months. These are less than the 500 cfs additional dilution flow that Order No. R5-2007-0134 relies on for post-Lower Yuba River Accord effluent limitations (Sections IV.A.2 and IV.B.2). In WQ 2008-0010, the State Water Board finds that the difference between pre- and post-Lower Yuba River Accord flows in the Lower Yuba River does not support a finding that the Yuba Accord will result in an extra 500 cfs in flow past the Facility’s diffuser. Therefore, Order No. R5-2007-0134 was remanded to remove the final effluent limitations for Discharge Point No. 001 and 002 that were to become effective upon State Water Board adoption of the Yuba Accord.

In accordance with WQ 2008-0010, this Order amends Order No. R5-2007-0134 by removing the final effluent limitation (Sections IV.A.2 and IV.B.2) that were based on critical low flow conditions of 1,500 cfs after the Lower Yuba River Accord was implemented.

Permit Revisions Based on Submittal of New Information

8. Order No. R5-2007-0134 includes a reopener provision for dynamic modeling if the Discharger performs a study to reevaluate effluent limits for specific constituents. The Discharger has requested the water quality-based effluent limitations (WQBELs) for lead be revised based on data collected after the 2007 report of waste discharge submittal. At the time Order No. R5-2007-0134 was adopted, there was insufficient data to develop the WQBELs using the Discharger's dynamic model, so the WQBELs were established without the consideration of dilution. The WQBELs established in Order No. R5-2007-0134 for lead were an average monthly effluent limitation (AMEL) of 0.61 µg/L and maximum daily effluent limitation (MDEL) of 1.23 µg/L. The Discharger has since collected lead effluent and receiving water data and performed a data analysis using the dynamic model. A technical report was submitted on 14 August 2008 providing the modeling results for lead. In accordance with the reopener provision and the additional information provided by the Discharger, this Order reopens and amends Order No. R5-2007-0134 by modifying the WQBELs for lead based on the dynamic model. Based on the dynamic model, WQBELs for lead are established as an AMEL of 17 µg/L and a MDEL of 36 µg/L. However, the Facility is capable of meeting more stringent performance-based effluent limitations. Therefore, to ensure compliance with state and federal Antidegradation requirements, a performance-based MDEL of 3.3 µg/L for lead is included in the amended permit. The Discharger can immediately meet the new effluent limit for lead, therefore, this Order also removes the compliance schedule and interim effluent limits for lead in Order No. R5-2007-0134.

9. The City of Yuba City submitted a Phase I aluminum water effects ratio (WER) study to develop a site-specific WER for aluminum. The Phase I WER study indicated that there was no observable toxicity up to aluminum dosages of 8,000 µg/L. The Discharger contended that based on this information, the chronic criterion of 87 µg/L recommended in USEPA's National Ambient Water Quality Criteria (NAWQC) for aluminum is not appropriate. However, at the time Order No. R5-2007-0134 was adopted there was insufficient information to accept the Phase I WER study results and required the Discharger to conduct a Phase II WER study. Several Phase I and II aluminum WER studies have been developed by other NPDES dischargers subsequent to the issuance of Order No. R5-2007-0134. The results of these studies indicate that the initial screening for aluminum toxicity levels as part of the Phase I studies were consistent with the results of the Discharger's Phase I study results, which showed toxicity only at very high aluminum concentrations. The Phase II WER studies, which are used to fine tune the toxicity results from the Phase I studies, confirmed the results of the Phase I studies for these other dischargers. Based on this information and the fact that the Phase I WER study demonstrated toxicity at concentrations significantly greater than the NAWQC chronic criterion, the Central

Valley Water Board finds that the NAWQC recommended chronic criterion is not appropriate to implement the Basin Plan's narrative toxicity objective for this discharge.

Order No. R5-2007-0134 includes a reopener provision that allows the permit to be reopened for modification based on the submittal of new information that was not available at the time of permit issuance. The additional Phase I and II aluminum WER studies is considered new information. Therefore, this Order amends Order No. R5-2007-0134 by revising the aluminum effluent limitations based on consideration of this new information. Based on the above information, using the NAWQC recommended acute criterion to calculate the WQBELs result in an AMEL of 432 µg/L and MDEL of 750 µg/L. However, these effluent limits are both greater than the performance based maximum daily interim effluent limit of 353 µg/L established in Order No. R5-2007-0134, which the Discharger is able to comply. Therefore, this Order establishes a final MDEL of 353 µg/L. In addition, since the new MDEL exceeds the secondary maximum contaminant level for aluminum (i.e., 200 µg/L) an annual average effluent limitation of 200 µg/L has also been added to Order No. R5-2007-0134 to ensure protection of the municipal and domestic water supply beneficial use.

10. Order No. R5-2007-0134 includes effluent limits for diazinon of 0.05 µg/L and 0.08 µg/L, as the AMEL and MDEL, respectively. These effluent limitations were based on the Basin Plan's water quality objectives for diazinon at the time Order No. R5-2007-0134 was adopted. Since the adoption of Order No. R5-2007-0134, the USEPA approved a Basin Plan amendment on 12 May 2008 that increased the water quality objectives for diazinon from 0.08 µg/L to 0.16 µg/L as a 1-hour average and 0.05 µg/L to 0.10 µg/L as a 4-day average. This Order amends Order No. R5-2007-0134 by revising the effluent limits for diazinon, based on the revised water quality objectives. The revised AMEL and MDEL for diazinon are 0.08 µg/L and 0.16 µg/L, respectively. This revision is based on new information that was not available at the time Order No. R5-2007-0134 was adopted.

11. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code section 21000, et seq.), in accordance with CWC section 15321 (a)(2), Title 14, of the California Code of Regulations.

12. The Central Valley Water Board has notified the Discharger and interested parties of its intent to amend Waste Discharge Requirements and the Monitoring Program Requirements for this discharge and has provided them with an opportunity to submit their written comments and recommendations.

13. Any person adversely affected by this action of the Board may petition the State Water Resources Control Board to review this action. The petition must be received by the State Water Resources Control Board, Office of the Chief Counsel, P.O. Box 100, Sacramento, CA 95812-0100, within 30 days of the date on which this action was taken. Copies of the law and regulations applicable to filing petitions will be provided on request.

IT IS HEREBY ORDERED THAT:

Waste Discharge Requirements Order No. R5-2007-0134 (NPDES No. CA0079260) is amended as shown in underline/strikeout format in Attachment A to this Order. Underlined text denotes additions and strikeout text represent deletions.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on **<Date>**.

PAMELA C. CREEDON, Executive Officer